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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/898,248	07/03/2001	Peter Bernhard Kaars	US018084	1932

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Corporate Patent Counsel
Philips Electronics North America Corporation
580 White Plains Road
Tarrytown, NY 10591

EXAMINER

CHANG, JON CARLTON

ART UNIT	PAPER NUMBER
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2623

DATE MAILED: 07/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/898,248

Applicant(s)

KAARS, PETER BERNHARD

Examiner

Jon Chang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 7/3/01 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 16 and 17 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 16 is drawn to a signal. A signal does not fall into any of the statutory classes of invention, and is therefore considered non-statutory.

Claim 17 is drawn to a software application. A software application is essentially a computer program. Computer programs *per se*, are considered functional descriptive material, and as such are non-statutory. To avoid this rejection, it is suggested that the preamble of the claim be amended to read, "A computer program product comprising a computer readable medium having stored thereon instructions executable by a computer, said instructions causing the computer to perform a method comprising:", or something similar.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the

applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-11 and 16-17 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,505,160 to Levy et al. (hereinafter "Levy").

Regarding claim 1, Levy discloses a method for computing a watermark for a piece of content, the method comprises:

computing a characteristic pattern representative of the piece of content, the characteristic pattern being associated with content-related information (column 8, lines 3-7; column 3, lines 24-25 and 59-60; column 9, lines 42-43); and,

computing the watermark for the piece of content from the characteristic pattern (column 2, lines 26-29 and 43-44; column 8, lines 21-24) , the watermark enabling to access the content-related information (column 2, lines 47-48; column 4, lines 33-34).

As to claim 2, Levy discloses the method of Claim 1, wherein the characteristic pattern is a fingerprint (column 9, lines 46-46-52).

As to claim 3, Levy discloses the method of Claim 1, wherein the watermark is further computed from the content-related information (column 8, line 67 to column 9, line 4)

With regard to claim 4, Levy discloses the method of Claim 1, wherein the content-related information is stored in a remotely accessible database and referenced by the characteristic pattern (column 6, lines 18-22).

Regarding claim 5, Levy discloses the method of Claim 1, further comprising:

incorporating in the watermark information data to identify a party transmitting the watermark (column 8, lines 65-67).

In regard to claim 6, Levy discloses the method of Claim 1, wherein the watermark comprises the content-related information (column 8, line 67 to column 9, line 15).

Regarding claim 7, Levy discloses the method of Claim 1, wherein the characteristic pattern comprises a hash derived from the piece of content (column 9, lines 53-55).

Regarding claim 8, Levy discloses the method of Claim 1, further comprising: embedding the watermark in the piece of content resulting in a marked content (column 8, lines 21-23).

As to claim 9, Levy discloses the method of Claim 8, further comprising: broadcasting the marked content (Fig.1, "Marked Object" and "Broadcast Media"; column 2, lines 5-21).

As to claim 10, Levy discloses the method of Claim 8, further comprising: transmitting the marked content over a radiotelephony network from a transmitting station to a handset; and, enabling to access the content-related information from the handset (column 2, lines 20-21; column 14, lines 16 and 24).

As to claim 11, Levy discloses the method of Claim 8, further comprising: broadcasting the marked content over a television network from a broadcast station to a set-top box; and, enabling to access the content-related information from the set-top box (column 14, line 59; column 14, lines 16-17 and 39).

As to claim 16, Levy discloses a signal representing a marked content (Fig.1, "Marked Object"), the signal comprising: a watermark enabling to access content-related information (column 2, lines 43-44), and wherein the watermark was derived on the basis of a characteristic pattern representative of the marked content (column 2, lines 26-29 and 43-44; column 8, lines 21-24), the characteristic pattern being associated with the content-related information (column 8, lines 3-7; column 3, lines 24-25 and 59-60; column 9, lines 42-43).

Regarding claim 17, Levy discloses a software application for carrying out a watermarking method (column 11, lines 10-11), the method comprising:

computing a characteristic pattern representative of a piece of content, the characteristic pattern being associated with content-related information (column 8, lines 3-7; column 3, lines 24-25 and 59-60; column 9, lines 42-43); and,

computing a watermark for the piece of content on the basis of the characteristic pattern (column 2, lines 26-29 and 43-44; column 8, lines 21-24), the watermark enabling to access the content-related information (column 2, lines 47-48; column 4, lines 33-34).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Levy.

Claim 12 is a device which corresponds to method claim 1. The discussion provided above for claim 1 is applicable here. While Levy does mention devices (e.g., wireless phones, set top boxes, etc., column 14, lines 15-25) the patent does not provide the details claimed. However, in view of the method provided by Levy, and the fact that the method is intended to be implemented in devices, it would have been obvious to one of ordinary skill in the art to provide a device with the claimed means for implementing Levy's disclosed steps.

With regard to claim 13, see the remarks provided above for claim 8.

Regarding claim 14, see the remarks provided above for claim 11.

With regard to claim 15, Levy discloses:

detecting in the marked content a watermark that was computed from a characteristic pattern representative of the marked content (column 12, lines 30-32);

retrieving, using the watermark, content-related information associated with the characteristic pattern (column 12, line 42 to column 13, line 28).

While Levy does mention devices (column 13, lines 23-28) the patent does not provide the details of the means as claimed. However, in view of the method provided by Levy, and the fact that the method is intended to be implemented in devices, it would

have been obvious to one of ordinary skill in the art to provide a device with the claimed means for implementing Levy's disclosed steps.

References Cited

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 6,345,256 to Milsted et al. discloses an automated method and apparatus to package digital content for electronic distribution using the identity of the source content. The patent teaches metadata as content-related information, hashing, and watermarking.

U.S. Patent Application Publication US 2002/0021805 A1 to Schumann et al. discloses a digital content distribution system and method, and teaches using fingerprinting to add watermarks to content.

U.S. Patent 6,411,725 to Rhoads discloses watermark enabled video objects. Watermark linking of video objects is implemented to allow retrieval of external, content-related information. Related information is stored in a database. The invention is similar to that provided in US Patent 6,505,160 to Levy.

U.S. Patent Application Publication US 2002/0162118 A1 to Levy et al. discloses efficient interactive tv. Content identifiers are provided to uniquely identify content and index corresponding interactive data stored in a database.

U.S. Patent Application Publication US 2003/0012548 A1 to Levy et al. discloses watermark systems for media, and teaches accessing content related information using watermarks.

U.S. Patent 6,671,407 to Venkatesan et al. discloses a system and method for hashing digital images. The patent describes determining the hash value of an image, and producing a watermark from the hash value. The hash value is associated with the image.

"Adaptive Water Marking" by Wong et al. teaches generating an adaptive watermark from image content.

"A Watermarking Technique Based on One-way Hash Functions" by Hwang et al. teaches a copyright watermarking scheme using one-way hash functions.

"Robust Hash Functions for Digital Watermarking" by Fridrich et al. teaches hash functions for digital watermarking.


Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jon Chang whose telephone number is (703)305-8439. The examiner can normally be reached on M-F 8:00 a.m.-6:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on (703)308-6604. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jon Chang
Primary Examiner
Art Unit 2623

Jon Chang
July 1, 2004